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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,599	10/24/2003	Reagan W. Moore	02737.0003.DVUS01	6487

7590 07/18/2006

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EXAMINER

ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/693,599	Applicant(s) MOORE ET AL.	
	Examiner Shahid Al Alam	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21, 23-32 is/are rejected.
- 7) ☒ Claim(s) 19 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04192004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 16 – 32 are pending in this Office action.

Drawings

2. Figure 13 is objected to because of minor informalities. Figure 13 is dark and blurry (smear) and therefore, it is hard to read. Corrected drawing sheet in compliance with 37 CFR 1.121(d) is required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 22 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 19 and 21. See MPEP § 608.01(n). Accordingly, the claim 22 has not been further treated on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16 – 18, 20 – 21 and 23 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 6,178,440 issued to Richard Foster et al. (Foster”) and in view of U.S. Patent Number 5,596,744 issued to Son Dao et al. (“Dao”).

With respect to claim 16, Foster teaches a method of a container comprising a plurality of data objects and an association of the plurality of data objects with a plurality of physical resources in the network assigned to the container at which the container may be stored or copied (column 7, lines 34 – 40), comprising:

issuing a request relating to one or more data object in a container in response to a user command; accessing a catalog in response to the request, the catalog associating the data objects in the container with the plurality of physical resources assigned to the container; copying a container from one physical resource to another assigned to the container transparently to the user should a staging condition arise; synchronizing multiple copies, or marking for synchronization at least one copy, of a container transparently to the user should an out-of-synchronization condition arise; and updating the catalog to reflect changes incidental to the request (column 6, line 9 – column 7, line 55).

Foster does not explicitly teach transparently managing containers in a network of distributed physical resources and maintaining a meta-data catalog as claimed.

Dao teaches in transparent integrated access to heterogeneous database management system a Smart Data Dictionary (SDD) server contains meta-data information and maintaining a catalog (Dao: column 10, lines 25 – 44 and column 11, lines 9 – 23).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine the teachings of Dao with the teachings of Foster to provide a system which would be extensible and flexible for providing users with

Art Unit: 2162

transparent integrated access to heterogeneous DBMS dispersed over a long haul network (Dao: column 1, lines 12 – 16).

As to claim 17, the meta-data for a container associates at least one cache resource and at least one archival resource with the container (Foster: column 7, lines 33 – 38).

As to claim 18, generating, responsive to a request to create a container, meta-data for the container; associating one or more physical resources with the container; storing the metadata in a meta-data catalog; and allocating one or more of the physical resources to the container (Foster: column 7, line 45 – column 8, line 7).

As to claim 21, querying, responsive to a request to read a data object, or part of an object as specified by a method or parameter, from a container, meta-data for the container, including an offset for the object within the container; locating on or staging to a selected physical resource a copy of the container; and reading the required data from the copy at the specified offset (Foster: column 6, lines 53 – 62 and column 7, lines 30 – 48).

As to claim 23, the plurality of physical resources is selected from the group comprising a file system (Foster: column 7, lines 33 – 38), an archival storage system (Dao: column 8, lines 21 – 23), a cache system (Dao: column 11, lines 9 – 30), and a database system (Dao: column 10, lines 25 – 44).

As to claim 24, the plurality of physical resources is selected from the group comprising object-oriented, relational, structured, and semi-structured systems (Foster: column 7, lines 30 – 38).

As to claim 25, receiving a request from a client, and responsive thereto, spawning a broker resources, executable on a server, for responding to the request (Foster: column 5, line 57 – column 6, line 27).

As to claim 26, the meta-data associating at least one archival resource with the container (Dao: column 10, lines 34 – 45 and Foster: column 7, lines 34 – 40).

As to claim 27, staging a copy of the container to a cache assigned to the container in response to a container read or write request upon determining that the data objects in the container are not stored in the cache (Foster: column 6, line 9 – column 7, line 25).

As to claim 28, synchronizing multiple copies of the container in response to a container write operation performed on a copy of the container stored in a cache assigned to the container (Foster: column 6, line 9 – column 7, line 25).

As to claim 29, marking at least one copy of the container as stored in a cache assigned to the container in response to a container write operation performed on a copy of the container stored in the cache (Foster: column 6, line 9 – column 7, line 25).

As to claim 30, purging at least one copy of the container in response to a purge condition (Foster: column 2, lines 63 – 64).

As to claim 31, purging any cache copies of the container after synchronizing multiple copies of the container including at least one archival copy (Foster: column 2, lines 63 – 64).

As to claim 32, the data objects in the container are unstructured (Foster: column 7, lines 30 – 38).

Art Unit: 2162

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foster and Dao as applied to claims above, and further in view of U.S. Patent Number 5,940,827 issued to Mark Hapner et al. ("Hapner").

With respect to claim 20, Foster and Dao teach responsive to a request, querying meta-data for the container and overwriting one or more of the other copies of the container (Foster: column 7, lines 30 – 48 and Dao: column 10, lines 33 – 50).

Foster and Dao do not explicitly indicate synchronize copies and a dirty copy of the container as claimed.

Hapner teaches claimed synchronize copies and a dirty copy (column 3, lines 24 – 40 and column 10, lines 1 – 12).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine the teachings of Hapner with the teachings of Foster and Dao to improve the integrity of overall system.

Allowable Subject Matter

6. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Art Unit: 2162

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Shahid Al Alam
Primary Examiner
Art Unit 2162

July 9, 2006